朝比奈泰彦*: 地衣類雑記 (§ 165—169)

Yasuhiko ASAHINA*: Lichenologische Notizen (§ 165—169)

§ 165. Stereocaulon japonicum Th. Fr. in De Stereoc. et Pilophor. Comment. 18, 1857. Nyl. Synop. 246; Lich. Japon. 18. 1890. Hue in Nouv. Arch. Mus. ser. 3, **2**: 247. 1890. et **10**: 253. 1898. Dodge in Ann. Crypt. Exot. **2**: 124. 1929. Sato in Nov. Flor. Japon. **7**: 72. 1941.

St. armatulum Zahlbr. in Fedde, Repert. **33**: 47. 1933. Sato l.c. 74.

Podetia subsimple, often with a few short branches towards the apex, phyllocladia cylindrical on the lower part of the podetia, rarely branched, becoming shorter towards the apex and at last papillate. Apothecia terminal, hypothecium brownish, spores cylindrical, 3-septate, one end a little attenuate, 25-35×4-5μ.

Saxicola in Hondo, Shikoku, Kiushu, Formosa and China. Algal cells of cephalodium are in general stigonemoid. Chemical contents: atranorin, stictic acid and a minor quantity of norstictic acid.

var. **subfastigiatum** Asahina nov. var.

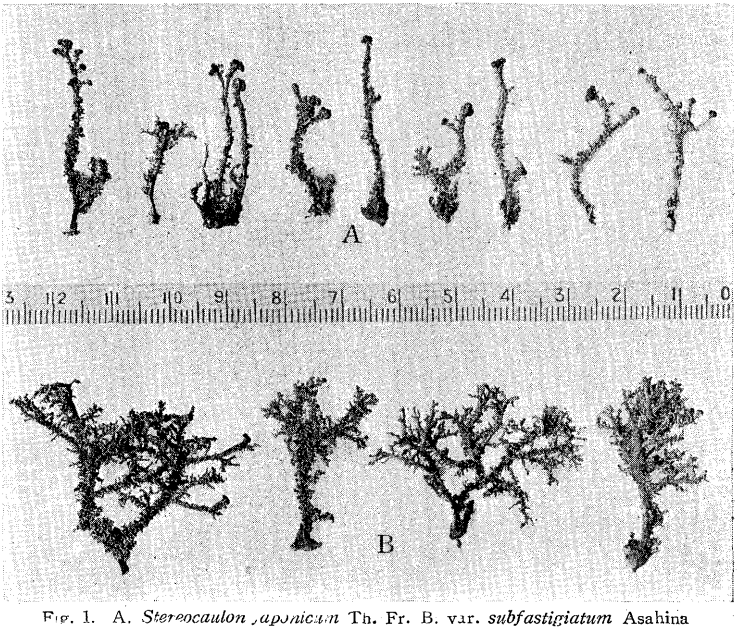

Fig. 1. A. *Stereocaulon japonicum* Th. Fr. B. var. *subfastigiatum* Asahina

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Podetia 2–4cm longa, tomentella vel subnuda, altero latere phyllocladiis destituta, fastigiato-ramosa. Ceterum ut in typo.

Typus: Inuyama, Prov. Owari (no. 1201), leg. Y. Asahina, 1938.

Contrary to the subsimple podetia of the type form, this variety is branched more frequently. But the phyllocladia on the apical part of the podetia are, as in the type form, shorter than those of the lower part, generally papillate.

Hymenium 65–70μ high, hypothecium together with excipulum proprium $\pm 120\mu$ high, epithecium brown hypothecium faintly brownish, paraphyses simple or furcate at the tip, asci oblong, $70\times15\mu$ large, 8–spored, spores fusiform, colorless, 3–septate, $25–30\times4–4.5\mu$. It contains atranorin, stictic acid and a trace of norstictic acid. Saxicola.

var. **commixtum** Asahina nov. var.

Statura ut vel in *St. japonico* vel in var. *subfastigiato*, sed differt phyllocladiis vulgo longioribus et materia propria continente. (vide infra)

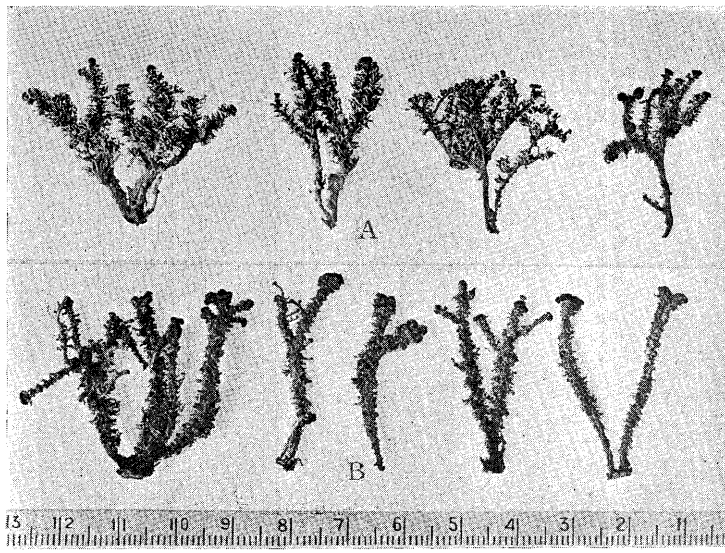


Fig. 2. *Stereocaulon japonicum* Th. Fr.
A. var. *commixtum* Asahina
B. subsp. *etigoense* Asahina

Typus: ad saxa secundum flumine Kisogawa, Prov. Owari, leg. Y. Asahina, 1938.

In the type plant phyllocladia growing on the lower part of the podetia are cylindrical and more orless branched, whereas on the apical part they are short

and often granular. On the other hand the podetia of the var. *commixtum* are equipped throughout with cylindrical, oft branched phyllocladia of 1–3 mm length.

Chemical test: The dried benzene extract consists of a mixture of atranorin and a white crystalline substance, which on recrystallization from G.E. solution under cover glass yields delicate radiating trichites or aggregating in tail form. This "materia propria" is K–, C–, KC faintly red (?), P– and an alcoholic solution is tinged violet by Fe. The dried acetone extract contains stictic acid (o-T.+hexagonal plates) and a trace of norstictic acid (K+ slender needles).

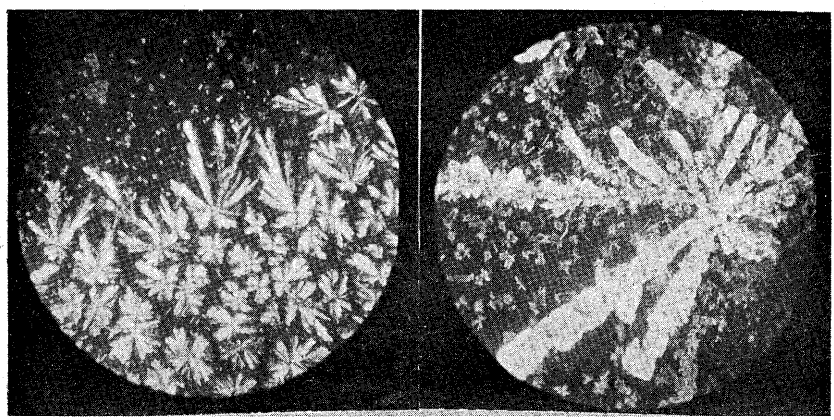
Spec. examin.: River Kisogawa, prope Inuyama, Prov. Owari (typus); River Hozugawa, prope Arashiyama, Prov. Yamashiro; River Yuragawa, prope Ayabe, Prov. Tanba; River Inagawa, prope Ikeda, Prov. Settsu; Tottori, Prov. Inaba; Sandan Gorge, Prov. Aki; Mt. Kenzan, Shikoku; along the coast of River Nakagawa, Prov. Awa, Shikoku.

As these localities show us, this variety grows preferably on the rocks of rivers sometimes submerged under water.

subsp. **etigoense** Asahina nov. subsp.

Statura thalli ut in typo, sed differt materiam propriam (crystallos lamelliformes) continente.

Spec. examin.: Pasture-ground of Sasagamine, Suginogawa-mura, Nakakubiki gun, Prov. Etigo; Kiyotsu Gorge (清津峡), Naka-uonuma-gun, Prov. Etigo; Minami-



A B

Fig. 3. Crystal aggregates of benzene extract recrystallized from G.E. solution:
A. *Stereocaulon iaponicum* var. *commixtum* Asahina
B. suhsp. *etigoense* Asahina

kanbara-gun, Prov. Etigo; Ho-on-ji yama, Ōno-gun, Prov. Etizen; Nozawa Hot Spring, Prov. Shinano; Water Power Station of Shinanojiri mura, Kami-mizuchi-gun, Prov. Shinano; Manpa, Yoshiki-gun, Prov. Hida.

This variety is almost impossible to distinguish from type forms by the external appearance. To test its chemism, extract a few pieces of podetia first with hot benzene and then with hot acetone. The dried benzene extract is in general varnish like which on recrystallization from G.E. solution under cover glass yields colorless irregularly linked thin lamellae together with minute solitary or radiating rods (atranorin). The dried acetone extract is scarce and gives color reaction neither with o-T. solution nor with KC (absence of stictic and lobaric acids).

The growing localities of this variety are concentrated in the Province of Etigo or its bonndaries.

§ **166. Stereocaulon depreaultii** Del. ex Nyl. Syn. 1.

Primary thallus unknown. Podetia up to 20 mm high, tightly attached to the substratum (non calcareous rocks), pale ochre-yellow, somewhat flattened and costate-rugose, up to 1.5 mm broad and 0.3 mm thick, dichotomous branching begins from the lower part of podetia, branches flexuose, one side profusedly scattered

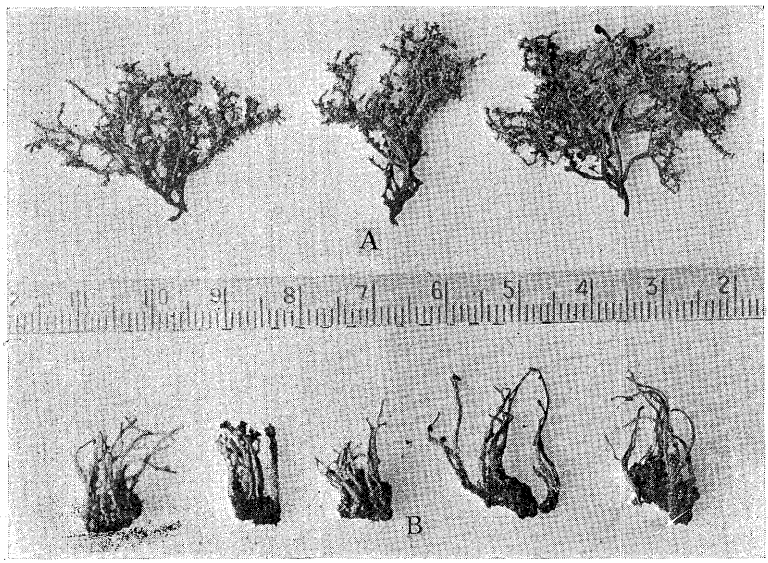


Fig. 4. A. *Stereocaulon depreaultii* Del.
B. *Stereocaulon pseudodepreaultii* Asahina

with minute, grain-like, subglobose, ashy white phyllocladia, the other side naked, etomentose, glabrous. Apothecia terminal on the branchlets, 1.0 mm wide thalline margine disappearing in early stage, disc dark brown, convex. Epithecium faintly brownish, hymenium 70μ high, hypothecium faintly brownish, together with colorless proper exciple 150μ broad, spores digitate cylindrical, 3-5 septate, 20-30$\times$4-4.5μ large. Cephalodia botryose, often stalked, grey, 0.5-1.5 mm broad, gonimia stigonemoid.

Mat. chim. propr.: atranorin and lobaric acid.

Spec. exam.: Lake Shirakaba, Prov. Shinano, Togashi, 1958.—Mt. Kimpoku, Sado Island, Togashi, 1954.—Mt. Himekami, Prov. Rikuchu, Muroi, 1956.

This identification was substantiated by Mr. M. Lamb, who told me that this species occurs rather rare even in its type locality (Newfoundland).

§ **167. Stereocaulon pseudodepreaultii** Asahina sp. nov.

Thallus primarius squamuloso-granulata, squamis cinereis usque ad 1 mm longis, 0.3 mm latis, varie ramosis, substrato adpressis vel partim ascendentibus. Podetia albido-pallida, usque ad 15 mm longa, 0.2-0.6 mm lata, subteretia, simplicia vel pauci ramosa, uno latere phyllocladiis cinereis, globuloso-granulatis, globulis 0.1-0.2 mm latis obsita, altero latere nuda, glabra. Cephalodia globosa, cinereo-nigricantia, 0.5-1.0 mm lata, botryosa, cellulis algarum stigonemoidea. Apothecia terminalia, 0.6-0.9 mm lata, solitaria vel paulo congesta, margine mox excluso, disco convexo, fusco. Epithecium fuscum; hymenium decolor, 80μ altum; hypothecium 45-50μ latum, dilute fuscum, a strato excipuli proprii bene limitatum; paraphyses simplices, filiformes; sporae cylindricae, 3-septatae, 30-34$\times$3-3.5μ.

Mat. chim. propr.: atranorinum et acidum lobaricum.

Specim. exam.: Mt. Aobayama, Prov. Wakasa, Togashi 1956 (Typus). Mt. Hyonosen, Prov. Inaba, Ikoma 1949. Mt. Nabeashi, Prov. Hitachi, Asahina 1950. Usui Pass, Prov. Kozuke, Uematsu 1926.

This new species closely resembles *St. depreaultii* Del. and possesses characteristic phyllocladia composed of minute globules. But it differs from the latter by the persisting primary thalli and subterete pauciramose podetia.

§ **168. Stereocaulon exile** Asahina sp. nov.

Thallus primarius primum granularis demum evanescens. Podetia 0.5-2.0 cm longa, 0.5-1.0 mm lata, gracilia, plus minusve complanata, glabra, superne, paullo ramosa, altero latere phyllocladiis cinereis, granulato-pulverulentibus, globoso-conglomeratis, globulis usque ad 0.6 mm latis interrupte obsita. Saxicola. Apothecia

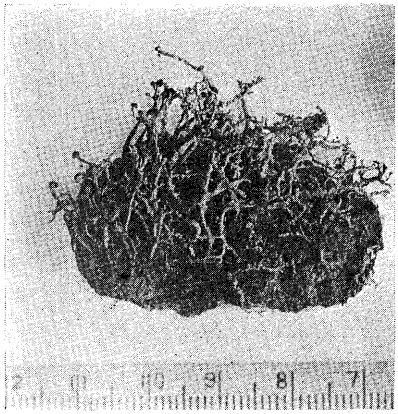


Fig. 5. *Stereocaulon exile* Asahina

terminalia, ±1.0mm lata, receptaculo pallide fusco, glabro, margine mox excluso, disco convexo fusco praedita. Epithecium fuscum; hymenium fere decolor, ±70 μ altum; hypothecium dilute fuscum, unacum excipulo proprio 110 μ latum; paraphyses filiformes, simplices vel rare furcatae, ca 1 μ latae; asci oblongi, 68 μ longi, 9 μ lati, 8-spori; sporae cylindricae rectae vel leviter curvatae, 3-septatae, utroque apicibus rotundatae, magnitudine 25-28×3μ. Cephalodia globosa, sessilia, cinereo-nigricantia, 0.5-1.0 mm lata, superficie granuralia, gonimia stigonemoidea.

Mat. chim. propr.: atranorinum, acidum sticticum et acidum norsticticum.

Specimina exam.: Moniwa (200 m.s.m.), Iizuka, Prov. Iwashiro, no. 6283, leg. T. Higuti, 1957 (Typus)—Usui Pass, Prov. Kozuke, leg. E. Uematsu, 1926.—Chichibu, Prov. Musashi, leg. I. Yoshioka, 1948.—Keigashima, Prov. Suruga, leg. Y. Asahina, 1931.—Sakurajima, Kiusiu, leg. H. Suzuki, 1949.—Orikasa, Prov. Rikuchu, leg. M. Sato, 1959.

§169. Stereocaulon verruculigerum Hue in Bull. Soc. Bot. France, **54**: 414-421. 1907.

St. formosanum Asahina in sched.

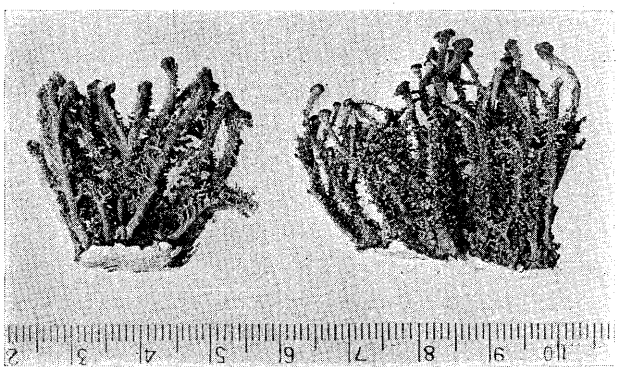


Fig. 6. *Stereocaulon verruculigerum* Hue var. *formosanum* Asahina

Statura thalli ut in *Stereocaulo japonico* Th. Fr., sed differt atranorinum et acidum lobaricum (nec acid. sticticum, nec acid. norsticticum) continente.

We meet very often *Stereocaulon* specimens morphologically identical

with *Stereocaulon japonicum*, but contains lobaric acid instead of stictic acid. On account of abundant occurrence of this type in Formosa I named them provisionally *Stereocaulon formosanum* Asahina in sched. Recently Mackenzie Lamb pointed out that a species from Java, *Stereocaulon verruculigerum* Hue, is identical with *St. formosanum* Asahina and sent me several individuals of this Javanese plant for comparison. By closer examination I came also to the same conclusion.

var. **formosanum** Asahina nov. var.

Podetia usque ad 3cm longa, 2mm lata, simplicia vel sursum breviter parce ramosa, vulgo tomentosa, in parte inferiore phyllocladiis cylindricis ±1 mm longis, ±0.1 mm latis, strigosis, apicibus albicantibus, in parte superiore papilliformibus munita. Apothecia terminalia, 1–1.5 mm lata, mox semiglobosa, disco convexo, fusco. Epithecium fuscum, hymenium ±90μ altum, hypothecium ca 50μ latum, fusconigricans, paraphyses filiformes, apice non incrassatae, sporae cylindricae, altero apice attenuatae, 3-septatae, 30–40×3–3.5μ.

Mat. chim. propr.: atranorinum et acidum lobaricum.

Saxicola in the higher mountain range of central Formosa.

□ 吉川純幹: **日本スゲ属植物図譜 (3)**

本書は本誌 **33**: 55, 306 で紹介したものの第3巻であつて，ホソスゲ他 69 種の図説であり，全3冊を通し 210 種が図説されている。これにて完結。各図版には1種類をあて，全形と部分図がある。発行所は金沢大学，理学部，植物学教室内，北陸の植物の会(振替 金沢 904)。非売品だが希望者には 1–2 巻各 550 円，第 3 巻 600 円でわけるよし。(久 内)

New book: J. Yoshikawa: Icones of Japanese Carex (3). 70 spp. are illustrated. The whole work is published in 3 volumes, each consists of 70 spp., published by the Hokuriku no Shokubutsu no Kai c/o Botanical Institute, Kanazawa University, Kanazawa, Japan. Vol. 1–2: 550 Yen each, Vol. 3: 600 Yen.

Corrigenda 正 誤

Journ. Jap. Bot. **35** (8):

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